AMENDMENTS TO THE CLAIMS

In the Claims:

Please cancel Claims 1-12, 14, 16, 17, and 20-28 without prejudice. Please amend Claims 13, 15, 18, and 19. Please add new Claims 29-52. A complete copy of the claims including marked-up versions of each claim that is amended in this Amendment appears below.

Claims 1-12 (Cancelled)

13. (Amended) An apparatus for automatic control of fluid flow ~~when~~ in response to the proximity of an object ~~is in proximity with~~ to the apparatus and for communicating with a communication device, the apparatus comprising:

a single infrared transmitter for selectively, alternately transmitting both an infrared detection signal and a transmitted infrared communication signal;

an infrared receiver for receiving a reflected infrared detection signal;

an infrared receiver for receiving a received infrared communication signal; and

logic operatively connected to drive said transmitter to transmit said infrared detection signal and said transmitted infrared communication signal, said logic also being operatively configured to receive said reflected infrared detection signal and said received infrared communication signal from said receivers, said logic being configured to include, in said transmitted communication signal, information indicative of an operational state of

the apparatus, said logic also being configured to control fluid flow based upon the reflected detection signal.

14. (Cancelled)

15. (Amended) ~~The~~ An apparatus ~~of claim 13~~ as defined in Claim 13, wherein ~~the~~ said infrared detection signal ~~is~~ comprises a sequence of pulses.

16-17 (Cancelled)

18. (Amended) ~~The~~ An apparatus ~~of claim 17~~ as defined in Claim 17, wherein ~~the~~ said logic is configured to exclude simultaneous transmission of ~~the~~ said infrared detection signal and ~~the~~ said transmitted infrared communication signal.

19. (Amended) ~~The~~ An apparatus ~~of claim 13,~~ for automatic control of fluid flow when an object is in proximity with said apparatus and for communicating with a communication device, said apparatus comprising:

a transmitter for transmitting a detection signal and a communication signal;

a receiver for receiving a reflected detection signal; and

logic configured to control fluid flow based upon said reflected detection signal;

wherein ~~the~~ said receiver comprises an infrared detector having a hole, wherein ~~the~~ said apparatus further comprises another infrared detector such that an infrared signal may pass through ~~the~~ said hole and be received by ~~the~~ said other infrared detector.

Claims 20-28 (Cancelled)

29. (New) An apparatus as defined in Claim 13, wherein said infrared detection signal comprises pulses having a repetition rate of between two and ten Hertz.

30. (New) An apparatus as defined in Claim 13, wherein said transmitted and received infrared communication signals each comprise a sequence of pulses representing data.

31. (New) An apparatus as defined in Claim 13, wherein the data rate for said transmitted and received infrared communication signals is approximately 9600 bits per second.

32. (New) An apparatus as defined in Claim 13, wherein the coupling between the logic and said transmitter comprises a digital-to-analog converter and an infrared driver.

33. (New) An apparatus as defined in Claim 13, wherein said infrared receiver for receiving said reflected infrared detection signal and said infrared receiver for receiving

said received infrared communication signal are configured in a back-to-back arrangement.

34. (New) An apparatus as defined in Claim 13, wherein said infrared receiver for receiving said reflected infrared detection signal and said infrared receiver for receiving said received infrared communication signal each comprise a photo detector.

35. (New) An apparatus as defined in Claim 13, wherein said infrared receiver for receiving said reflected infrared detection signal and said infrared receiver for receiving said received infrared communication signal together comprise a single photo detector.

36. (New) An apparatus as defined in Claim 13, additionally comprising a threshold detector for comparing said reflected infrared detection signal to a threshold value and providing the result of the comparison as an output to said logic.

37. (New) An apparatus for automatic control of fluid flow in response to the proximity of an object to the apparatus and for communicating with a communication device, the apparatus comprising:

a transmitter device for selectively, alternately transmitting both a detection signal and a transmitted communication signal;

a receiver device for receiving a reflected detection signal and a received communication signal; and

logic operatively connected to drive said transmitter device to transmit said detection signal and said transmitted communication signal, said logic also being operatively configured to receive said reflected detection signal and said received communication signal from said receiver device, said logic being configured to include, in said transmitted communication signal, information indicative of an operational state of the apparatus, said logic also being configured to control fluid flow based upon the reflected detection signal.

38. (New) An apparatus as defined in Claim 37, wherein each of said signals comprises an infrared signal.

39. (New) An apparatus as defined in Claim 37, wherein each of said signals a sequence of digital pulses.

40. (New) An apparatus as defined in Claim 37, wherein said logic is configured to exclude simultaneous transmission of said detection signal and said transmitted communication signal.

41. (New) An apparatus as defined in Claim 37, wherein said receiver device comprises a single photo detector.

42. (New) An apparatus as defined in Claim 37, wherein said receiver device comprises a receiver for receiving said reflected detection signal and a receiver for receiving said received communication signal.

43. (New) An apparatus as defined in Claim 42, wherein said receiver for receiving said reflected infrared detection signal and said receiver for receiving said received infrared communication signal are configured in a back-to-back arrangement.

44. (New) An apparatus as defined in Claim 37, additionally comprising a threshold detector for comparing said reflected detection signal to a threshold value and providing the result of the comparison as an output to said logic.

45. (New) An apparatus for automatic control of fluid flow in response to the proximity of an object to the apparatus and for communicating via bidirectional telemetry with an external communication device, the apparatus comprising:

a transmitter device for transmitting both a detection signal and a transmitted communication signal for receipt by an external communication device;

a receiver device for receiving a detection signal reflected from an object in proximity to the apparatus and a received communication signal received from an external communication device; and

logic operatively connected to drive said transmitter device to transmit said detection signal, said logic also being operatively configured to communicate bidirectionally with an external communication device by causing said transmitter device to transmit said transmitted communication signal and receiving said received communication signal from said receiver device, said logic also being configured to control fluid flow based upon the reflected detection signal.

46. (New) An apparatus as defined in Claim 45, wherein each of said signals comprises an infrared signal.

47. (New) An apparatus as defined in Claim 45, wherein each of said signals a sequence of digital pulses.

48. (New) An apparatus as defined in Claim 45, wherein said logic is configured to exclude simultaneous transmission of said detection signal and said transmitted communication signal.

49. (New) An apparatus as defined in Claim 45, wherein said receiver device comprises a single photo detector.

50. (New) An apparatus as defined in Claim 45, wherein said receiver device comprises a receiver for receiving said reflected detection signal and a receiver for receiving said received communication signal.

51. (New) An apparatus as defined in Claim 50, wherein said receiver for receiving said reflected infrared detection signal and said receiver for receiving said received infrared communication signal are configured in a back-to-back arrangement.

52. (New) An apparatus as defined in Claim 45, additionally comprising a threshold detector for comparing said reflected detection signal to a threshold value and providing the result of the comparison as an output to said logic.